## 7.5.9 UTILITIES, ENERGY, AND SITE SERVICES

**7.5.9 (95)**
**Comment** - 4 comments summarized
Commenters said that the discussion of electrical-power requirements in the EIS was insufficient and failed to adequately discuss alternatives or describe the potential impacts of onsite and offsite power-line construction or modification required to meet projected demand. Some said that the information included in Chapter 4 (impacts) should have been in Chapter 3 (affected environment). Others said that deferring impact analyses to future National Environmental Policy Act documents, as mentioned in the EIS, was not adequate because impacts cannot be determined from the "range of options" considered in the EIS. Other commenters requested that the Final EIS reflect the new ownership relationship between Nevada Power and Sierra Pacific Power Company.

**Response**
As described in Section 4.1.11.2 of the EIS, the current electric-power supply to Yucca Mountain from the Nevada Test Site would not be sufficient for future project needs. DOE would use electricity from renewable energy sources at the repository (DIRS 153882-Griffith 2001). The flexible design includes a 3-megawatt solar power generating facility that DOE would use in conjunction with commercially available power to meet the requirements of the repository. The solar facility, which could produce as much as 3.0 megawatts of power, would be a dual-purpose facility, serving as a demonstration of photovoltaic power generation and augmenting the overall repository electric power supply (as much as 7 percent). Impacts associated with the construction, operation, and maintenance of the solar power generating facility have been included in the impacts reported in Chapter 4 of the Final EIS.

In addition, though not part of the Yucca Mountain Proposed Action, DOE is investigating another proposal for renewable energy—a 4.9-square-kilometer (1,200-acre) "wind farm" on the Nevada Test Site that could provide electric power to the repository. As described in a recent draft environmental assessment (DIRS 154545-DOE 2001), this private-sector enterprise would be the Nation's second largest wind farm, with more than 500 wind turbines, each 55 meters (150 feet) tall. It would generate as much as 436 megawatts of electricity.

Section 4.1.11.2 also discusses the electrical requirements for the repository, along with several options under consideration by DOE to supply this electricity. The impacts of implementing each of these options was not examined in detail in the EIS, because it is not clear at this time how the electrical demand could best be met. Nevertheless, as stated in Section 4.1.11.2, electrical demand for the repository would be well within the expected regional capacity for power generation. Nevada Power's current planning indicates that it intends to maintain a reserve capacity of 12 percent. In 2010, at the beginning of the operation and monitoring phase of the repository, Nevada Power expects a net peak load of 5,950 megawatts and is planning a reserve of 714 megawatts (DIRS 103413-NPC 1997). The maximum 54-megawatt demand that the repository would require would be less than 1 percent of the projected peak demand in 2010, and less than 6 percent of the planned reserve. Thus, DOE expects that regional planning for future electrical needs would easily accommodate future demand at the repository and repository demand for electrical power would not constitute an important factor for regional decisionmaking. As discussed in Section 4.1.11.2, the estimated repository electric demand would exceed the current electric distribution system, but in all cases, upgrades would use the existing power corridors where possible to limit environmental impacts.

DOE believes that detailed analysis of specific electrical supply options now would be speculative. As mentioned in Section 4.1.11.2, depending on the option, additional National Environmental Policy Act analyses may be required.

With regard to the location of text in the EIS, Section 3.1.11.2 describes the existing electrical distribution and supply system in the affected area. DOE believes that the information in Section 4.1.11.2 on specific electrical requirements for the repository, and options for supplying this power, is not appropriate for Chapter 3.

The text of the EIS has been changed to reflect the merger of Sierra Pacific Power and Nevada Power in July 1999.

**7.5.9 (175)**
**Comment** - 24 comments summarized
Commenters noted that the Nevada State Engineer rejected DOE's request for a water appropriation for activities at the Yucca Mountain Repository. In view of this, some wanted to know how DOE was going to acquire water for the project. Others wanted to know if DOE would truck water to the site.

**Response**
DOE filed suits on March 2, 2000, in the U.S. District Court for the District of Nevada, and on March 3, 2000 in Nevada's Fifth Judicial District Court for injunctive relief to overturn the Nevada State Engineer's Ruling No. 4848, dated February 2, 2000, denying DOE's water-appropriation request for 430 acre-feet per year for repository construction and operation. The State Engineer based his denial on a finding that the requested use threatened to prove detrimental to the public interest.

On September 21, 2000, the U.S. District Court Judge granted the State's motions to dismiss the DOE lawsuit. DOE appealed this ruling on November 16, 2000. On October 15, 2001, the Ninth U.S. Circuit Court of Appeals ordered a Federal judge to hear the DOE's suit. The case is pending.

DOE has not developed any other plans to acquire water for the proposed repository. Depending on the final ruling of the State Court, DOE could consider other options for obtaining the water needed to carry out its responsibilities under the NWPA. DOE would evaluate the need for additional environmental review at that time, consistent with National Environmental Policy Act requirements.

**7.5.9 (1100)**
**Comment** - EIS001896 / 0021
Section 4.1.11.2

There could be indirect impact on the City of Henderson in providing power to the Yucca Mountain site from Hoover Dam through Las Vegas to Mercury. The environmental consequences associated with adding power lines through the City of Henderson have not been addressed. In recent years, proposals for extensions and expansions of transmission lines in the City of Henderson have been required to be buried underground to avoid impacts to the general health, safety and welfare of our residents and visual impacts to the environment.

**Response**
No additional power lines would be required through the City of Henderson to support the additional capacity discussed in Section 4.1.11.2 of the EIS.

**7.5.9 (4472)**
**Comment** - 010140 / 0001
Page 3-19, fifth paragraph, how much electrical energy will be needed to refine the titanium?

**Response**
Because Yucca Mountain does not need large quantities of titanium for at least 75 years, any estimate of the resources required for the process would be speculative and out of date by the time production actually started.

**7.5.9 (4563)**
**Comment** - EIS001521 / 0077
Page 4-29, second paragraph--If the estimated water demands for repository development and emplacement activities exceed that for the lowest "regulated" yield for the Jackass Flats hydrographic area (in combination with other Nevada Test Site activities) under the l-t-l scenario, what is the identified source for the additional water?

**Response**
As indicated in Section 4.1.3.3 of the EIS, the highest annual demand for any of the operational scenarios would be about 0.36 million cubic meters (290 acre-feet) and would last for about 22 years. Annual water demand before and after this period would be lower. Even combined with the annual water demand from on-going Nevada Test Site activities in this area (0.34 million cubic meters or 280 acre-feet), the lowest estimate of perennial yield (0.72 million cubic meters or 580 acre-feet) for the western half of Jackass Flats would not be exceeded.

It should be noted that the lowest estimate of perennial yield identified in the EIS for the Jackass hydrographic area is not characterized as a "regulated" perennial yield value. As identified in the discussion of perennial yield in Section 4.1.3.3, a 1992 ruling by the Nevada State Engineer (DIRS 105034-Turnipseed 1992) described the perennial yield of the Jackass Flats hydrographic area as 4.9 million cubic meters (4,000 acre-feet). DOE has chosen to compare water demand values to the low estimate of perennial yield to be conservative in its evaluations of impacts.

**7.5.9 (4568)**
**Comment** - EIS001521 / 0082
Page 8-33, seventh paragraph--The discussion fails to mention that under the low thermal load waste-emplacement scenario, when combined with other Nevada Test Site ground-water usage, the 580 acre-feet per year yield value will be exceeded (see page 4-29, second paragraph).

**Response**
The groundwater discussion cited by the comment is in Section 8.2.3.2.1 of the EIS and deals with impacts associated with the inventory Modules 1 and 2, which the EIS considers to be "reasonably foreseeable future actions." The comment is correct that the cumulative impact of water demand associated with on-going Nevada Test Site activities in the repository area is not discussed in this section. The cumulative impact of Nevada Test Site activities is, however, discussed in the next section of the EIS (that is, Section 8.2.3.2.2). This organization of text and contents is true for both the Draft and Final documents.

Current estimates of water demand for inventory Modules 1 and 2 action are lower than those described in the Draft EIS. As indicated in Section 8.2.3.2.1 of the EIS, the highest annual demand for any of the operational scenarios with Modules 1 and 2 would be about 0.39 million cubic meters (320 acre-feet) and would last for about 36 years. Annual water demand before and after this period would be lower. As described in Section 8.2.3.2.2, the repository demand under one of the lower-temperature scenarios, when combined with the annual water demand from ongoing Nevada Test Site activities in this area (0.34 million cubic meters or 280 acre-feet), would slightly exceed the lowest estimate of perennial yield (0.72 million cubic meters or 580 acre-feet) for the western half of Jackass Flats. The other operational modes, when combined with water demands for on-going Nevada Test Site activities, would be below this lowest estimate of perennial yield. None of the water demand estimates would approach the high estimate of perennial yield for the entire Jackass Flats hydrographic area, which is 4.9 million cubic meters (4,000 acre-feet). For a discussion of potential impacts, see Section 8.2.3.2.2 of the EIS.

**7.5.9 (4569)**
**Comment** - EIS001521 / 0083
Page 8-35, second paragraph--The statement about 280 acre-feet per year for water use is incorrect. According to page 3-56, Table 3-15, that value represents total water use for 1994 and not for just the Nevada Test Site "ongoing" activities, as the statement implies. How was the 280 acre-feet value determined? Table 3-15 shows that the total use from the Jackass Flats hydrographic area has been as high as 400 acre-feet (for 1996), and only 66 acre-feet of that total were for Yucca Mountain site-characterization activities. Will ongoing activities at Yucca Mountain and the Nevada Test Site decrease to a point where they require much less water?

**Response**
The table in Chapter 3 describes historical withdrawals of water from wells in the vicinity of Yucca Mountain. The value of 280 acre-feet (about 350,000 cubic meters) per year as identified in the comment is a planning estimate of what the Nevada Test Site might require in the future from the wells in this area, whether or not the proposed repository action is implemented. It comes from a *Nevada Test Site Resource Management Plan* as referenced in the EIS. This value is used consistently throughout the EIS (including Sections 4.1.3.3 and 8.2.3.2.2) as a water demand that would be cumulative (and from the same hydrographic area) with water demand from the Proposed Action.

With respect to the Chapter 3 table of water withdrawals, the comment is correct that the highest annual withdrawal shown in the table is 400 acre-feet. However, both the 66 acre-feet shown in the second column and the 180 acre-feet shown in the fourth, C-wells, column are attributed to Yucca Mountain site characterization activities. Withdrawals from the C-wells are identified separately because they were associated with groundwater hydrology testing and the water was put back into the ground.

The EIS evaluates estimated water demand from the proposed repository action by project phase (that is, performance confirmation, construction, operation and monitoring, and closure). As might be expected, water demand would vary during each phase of repository activities; the concurrent water demand for on-going Nevada Test Site activities in this area is assumed to stay constant at 280 acre-feet per year.

**7.5.9 (5039)**
**Comment** - 010212 / 0006
The Supplement introduces the plan to add renewable energy sources to the repository. These would be supplementary to upgrading the existing electric transmission and distribution service from the Nevada Test Site. These additions should help reduce off-site electricity requirements during periods when the renewables can meet some of the repository requirements.

The solar generating facility has some site impacts that are analyzed in the Supplement, although exact site is not identified yet. The possible development of a 436 MW wind farm on the Nevada Test Site, however, is not part of this proposed action. That may also contribute electricity to the repository but we gather it is an independent decision.

**Response**
The solar facility, which could produce as much as 3 megawatts of power, would be a dual-purpose facility, serving as a demonstration of photovoltaic power generation and augmenting the overall repository electric power supply (as much as 7 percent). The wind farm is a separate, privately funded project that would supply power to the commercial market. DOE would consider obtaining power from the facility for the Nevada Test Site or the repository, depending on availability and cost of the power.

**7.5.9 (5621)**
**Comment** - EIS001887 / 0247
Page 4-67; Section 4.1.11.1 - Impacts to Utilities, Energy, Materials, and Site Services from Performance Confirmation

This section should give more detail as to what existing sources and suppliers would be used; what wells would be pumped; and what regional suppliers of power would be used. Have there been any discussions with these existing sources and suppliers? Also, does this section cover performance confirmation activities throughout the operating life of the repository?

**Response**
Existing sources and suppliers of electricity would include Nevada Power Company and Valley Electric Association. Water and sewer would be provided by permitted on-site services. Water would be supplied by wells J-12/J-13 with the C-Well Complex as a backup water supply during construction and operation. No discussions with outside utility service companies have occurred.

The potential impacts discussed in Section 4.1.11 of the EIS apply during performance confirmation, construction, operation and monitoring, and closure of the repository. The performance confirmation period would extend until the start of repository closure; Section 4.1.11.2 describes those impacts.

**7.5.9 (5996)**
**Comment** - EIS001879 / 0021
p. 3-89, 4th paragraph

The discussion concerning wastewater treatment in southern Nye County is incorrect....the community of Beatty is not reliant on domestic septic systems. The EIS should be revised to accurately reflect the conditions in Nye County.

**Response**
Southern Nye County does not have a metropolitan area or a sanitation district comparable to Clark County. Most communities in this area rely primarily on individual dwelling or small communal wastewater-treatment systems, with the exception of Beatty, which has a municipal sewer service. DOE has revised Section 3.1.11 of the EIS.

**7.5.9 (8839)**
**Comment** - EIS000869 / 0013
Paragraph two [in Section 5.4.1.1] discusses the need for additional electrical power delivery to the Yucca Mountain site. With the heat being generated by the stored nuclear waste, why would there be a need for increased electrical power delivery. The excess heat units should be utilized for development of electrical energy instead of increasing electrical requirements.

**Response**
Although the technology exists for generating electricity from the residual thermal output of spent nuclear fuel, the design of the repository is not well suited for generating electricity from such an application. In addition, the installation of the necessary equipment could affect the ability of the repository to isolate waste. Regardless, such a technology would not entirely offset the electrical needs of the repository and DOE would still be required to obtain additional electricity for the repository.

**7.5.9 (11016)**
**Comment** - EIS001896 / 0014
Section 3.1.11.2

There could be indirect impact on the City of Henderson in providing power to the Yucca Mountain site from Hoover Dam through Las Vegas to Mercury. The environmental consequences associated with adding power lines through the City of Henderson have not been addressed. In recent years, proposals for extensions and expansions of transmission lines in the City of Henderson have been required to be buried underground to avoid impacts to the general health, safety and welfare of our residents and visual impacts to the environment.

**Response**
No additional power lines would be required through the City of Henderson to support the additional capacity discussed in Section 4.1.11.2 of the EIS.

**7.5.9 (11246)**
**Comment** - 010096 / 0021
Page 2-19 – The SDEIS should consider use of Pinyon-Juniper biomass from Lincoln County as an alternative to fuel oil for a central heating plant. Bureau of Land Management planned thinning of P-J [Pinyon-Juniper] woodlands over the life of the repository will result in large quantities of biomass.

**Response**
The design of the surface facilities continues to evolve as the overall design of the repository matures. DOE would continue to evaluate options for providing fuel sources for repository facilities.

**7.5.9 (12167)**
**Comment** - 010319 / 0013
[...a huge storage pool presents problems] with regard to where the water would come from for the purpose and where it would go after it was ready to be "gotten rid of."

**Response**
The proposed site water system would receive water from the Nevada Test Site Well J13 and associated wells. Well water would supply both potable and nonpotable water needs. New pipelines, pumps, tanks and chlorination equipment would be constructed to provide for anticipated demand (see Section 2.1.2.1 of the EIS for details). For more information about the site water system, see Attachment II, Section 2.3, *Engineering Files for Site Recommendation*. (DIRS 123881-CRWMS M&O 2000)

DOE filed suits on March 2, 2000, in the U.S. District Court for the District of Nevada, and on March 3, 2000, in Nevada's Fifth Judicial District Court for injunctive relief to overturn the Nevada State Engineer's Ruling No. 4848, dated February 2, 2000, denying DOE's water-appropriation request for 430 acre-feet per year for repository construction and operation. The State Engineer based his denial on a finding that the requested use threatened to prove detrimental to the public interest.

On September 21, 2000, the U.S. District Court Judge granted the State's motions to dismiss the DOE lawsuit. DOE appealed the ruling on November 16, 2000. On October 15, 2001, the Ninth U.S. Circuit Court of Appeals ordered a Federal judge to hear the DOE's suit. The case is pending.

The proposed Yucca Mountain Repository design continues to plan on the use of water from Nevada Test Site water wells. DOE will review this plan and determine what action is necessary based on future court rulings.

DOE has not developed any other plans to acquire water for the proposed repository. Depending on the final ruling of the State Court, DOE may consider other options to carry out its responsibilities under the Nuclear Waste Policy Act, as amended.

As discussed in Section 3.1.12.4 of the Supplement to the Draft EIS, during the lifetime of Proposed Action, about 2 billion liters (530 million gallons) of sanitary sewage would be generated under the higher-temperature repository operating mode and as much as 4.1 billion liters (1.1 billion gallons) under the lower-temperature repository operating mode. About 1 billion liters (260 million gallons) of industrial wastewater would be generated under the higher-temperature mode and as much as 3.4 billion liters (900 million gallons) under the lower-temperature mode. Sanitary sewage and industrial wastewater for the flexible design would be slightly more than double the amounts for the Draft EIS design. As reported in the EIS, DOE would treat and dispose of sanitary sewage in onsite septic systems and industrial wastewater in onsite evaporation ponds.

**7.5.9 (12236)**
**Comment** - 010002 / 0002
Electrical Supply -- Aside from the commercially supplied electric power, the report discusses potentially constructing a 3-megawatt solar power generating facility. As far as I am aware the funds for constructing the Yucca Mountain Repository are derived from fees levied on nuclear utilities on a per nuclear MW-hr basis. It would not be right to use that money to construct a generation facility which in effect competes with utilities. (It would be like the government placing a surcharge on commercially sold beer and using those proceeds to construct an experimental brewery to compete with the commercial brewers!) If your response to this is that on-site generated electricity will lower operation costs which benefits the "member" utilities, then I say let the solar units be funded through private interests who compete with utilities for sales to the Yucca Mountain Project.

**Response**
The solar facility, if constructed, would be an operational element of the proposed repository and as such would be funded with both defense and Nuclear Waste Fund appropriations. At this time, the taxpayer portion of the total cost is expected to be about 30 percent.

The solar facility, which could produce as much as 3 megawatts of power, would be a dual-purpose facility, serving as a demonstration of photovoltaic power generation and augmenting the overall repository electric power supply (as much as 7 percent). As such, all of the generating capacity of the solar facility would be used to offset the baseload electrical requirements of the repository and none would be available for resale. Therefore, the facility would not be in direct competition with private utilities. If the 3-megawatt plant is built as a part of the Proposed Action it would be one of the largest operating solar/electric plants in the United States and would represent a significant advance in solar power applications.

**7.5.9 (12237)**
**Comment** - 010002 / 0003
The "wind farm" also described in this report purports to be a private-sector enterprise. This would be acceptable to me as long as Yucca Mountain purchases power from it on an open, competitive market.

**Response**
The wind farm is a privately funded project. DOE would evaluate the possibility of obtaining power from this facility for use at Yucca Mountain. DOE would expect that the owner of the facility would consider supplying power to DOE in the same way as any other customer who would buy power from the facility.

**7.5.9 (12537)**
**Comment** - 010242 / 0018
Page 2-18: Section 2.3.2.4.4 - Electric Power

The Supplement states, "The S&ER flexible design includes a 3-megawatt solar power generating facility that DOE would use in conjunction with commercially available power to meet the requirements of the repository." The solar facility would be located near the North Portal Operations Area. The peak electrical demand for the repository operation would be 47 to 57 megawatts, and the addition of the solar power supplement would not alleviate the need to upgrade transmission capacity (Page 3-12). If solar power is to be developed for repository operations, it should be at least sufficient to offset the transmission upgrade need, thus eliminating the impacts of that activity. Doing otherwise would only unnecessarily increase the impacts of repository development and operation, e.g., disturbed land and hazardous waste (resulting from the need to replace the 27,000 solar panels at least once because of the long duration of operation).

**Response**
The solar power generating facility is a dual-purpose unit. It would provide up to 7 percent of the power needs of the repository, and would be a demonstration of the viability of photovoltaic solar power. If the 3-megawatt plant was built as a part of the Proposed Action, it would be one of the largest operating solar electric plants in the United States and would represent a significant advance in solar-power applications. Considering the present state of solar plant installation and operating experience, it would not be appropriate to build a larger plant at that time. However, it is possible that the size of the solar power generating facility at Yucca Mountain could be increased after operation of the facility verified efficient performance.

**7.5.9 (12716)**
**Comment** - 010073 / 0020
Page 2-19 - The SDEIS should consider use of Pinyon-Juniper biomass from White Pine and Lincoln County as an alternative to fuel oil for a central heating plant. Bureau of Land Management planned thinning of Pinyon-Juniper woodlands over the life of the repository will result in large quantities of biomass.

**Response**
The design of the surface facilities continues to evolve as the overall design of the proposed repository matures. DOE would continue to evaluate options for providing fuel sources for repository facilities.

**7.5.9 (13002)**
**Comment** - 010292 / 0009
On the subject of the Yucca Mountain site itself, the repository is projected to be there for a long, long time. Is the necessary water supply assured forever? What if, in spite of the best laid plans, the supply of electricity is insufficient for personnel safety?

**Response**
DOE filed suits on March 2, 2000, in the U.S. District Court for the District of Nevada, and on March 3, 2000, in Nevada's Fifth Judicial District Court for injunctive relief to overturn the Nevada State Engineer's Ruling No. 4848, dated February 2, 2000, denying DOE's water-appropriation request for 430 acre-feet per year for repository construction and operation. The State Engineer based his denial on a finding that the requested use threatened to prove detrimental to the public interest.

On September 21, 2000 the U.S. District Court Judge granted the State's motions to dismiss the DOE lawsuit. DOE appealed this ruling on November 16, 2000. On October 15, 2001, the Ninth U.S. Circuit Court of Appeals ordered a Federal judge to hear the DOE's suit. The case is pending.

DOE has not developed any other plans to acquire water for the proposed repository. Depending on the final ruling of the State Court, DOE might consider other options to carry out its responsibilities under the NWPA.

As described in Section 4.1.11.2 of the EIS, the current electric-power supply to Yucca Mountain from the Nevada Test Site would not be sufficient for future project needs. Section 4.1.11.2 discusses the electrical requirements for the repository, along with several options under consideration by DOE to supply this electricity. The impacts of

implementing each of these options was not examined in detail in the EIS, because it is not clear at this time how the electrical demand could best be met. Nevertheless, as stated in Section 4.1.11.2, electrical demand for the repository would be well within the expected regional capacity for power generation. Nevada Power's current planning indicates that it intends to maintain a reserve capacity of 12 percent. In 2010, at the beginning of the operation and monitoring phase of the repository, Nevada Power expects a net peak load of 5,950 megawatts and is planning a reserve of 714 megawatts (DIRS 103413-NPC 1997). The maximum 54-megawatt demand that the repository would require would be less than 1 percent of the projected peak demand in 2010, and less than 6 percent of the planned reserve. Thus, DOE expects that regional planning for future electrical needs would easily accommodate future demand at the repository.

**7.5.9 (13110)**
**Comment** - 010227 / 0028
While Shundahai Network supports the use of alternate and renewable energy as an alternative to nuclear power, it is shocking to consider that the yucca mountain project would not be using enough solar power to justify the production of transmission lines. The sun beams brightly on Yucca Mountain, and it is a good source of energy, however, if it is to be used in this project, solar should be the primary source of power at the site, and enough power should be generated and used to really get something out of it.

**Response**
The solar facility, which could produce as much as 3 megawatts of power, would be a dual-purpose facility, serving as a demonstration of photovoltaic power generation and augmenting the overall repository electric power supply (as much as 7 percent). If the 3-megawatt plant was built as a part of the Proposed Action it would be one of the largest operating solar electric plants in the United States and would advance solar-power applications. Considering the current state of solar plant installation and operating experience, it would not be feasible to build a larger plant at that time. However, it is possible that the size of the solar power generating facility at Yucca Mountain could be increased if operation of the facility verified efficient performance.

**7.5.9 (13209)**
**Comment** - 010244 / 0008
The SDEIS offers no explanation of the need for up to four times as much electrical energy and five times as much waste generation for the lower temperature alternative than the DEIS design.

**Response**
Both the higher-temperature and lower-temperature operating modes of the flexible design use electrically powered fans to provide forced flow air cooling to the repository emplacement drifts. The number of fans gradually increases from the start of emplacement to the completion of emplacement when all fans have been placed in operation. The fans continue to operate during monitoring for up to 300 years depending on the specific scenario. The Draft EIS scenarios included much smaller fans for ventilation and did not include the operation of fans for forced air cooling to the emplacement drifts. The substantially increased capacity of the fans, and operation of the fans for up to 300 years, are the reasons electrical power use for the flexible design scenarios is greater than the Draft EIS design.

**7.5.9 (13349)**
**Comment** - 010296 / 0009
Other potential sources of supplemental power (electricity) may need to be evaluated to reduce environmental impacts.

**Response**
The design of the surface facilities continues to evolve as the overall design of the proposed repository matures. DOE would continue to evaluate options for providing electrical power to repository facilities.

**7.5.9 (13405)**
**Comment** - 010296 / 0030
Nye County believes that the footprint of the repository can be reduced substantially. The extra demand on power and other resources may have adverse impact on the supply and demand in the Amargosa Valley area. It is not certain whether in either case the population growth is considered. DOE considers the fuel and other resources used for the Yucca Mountain project to be "small" compared to what is available in the region. Population growth in the

first 50 to 75 years of operation should be considered before such claims can be made. Population growth will put extra demand on these resources. Repository operation will be competing for these resources and may be restricting the growth in the area.

**Response**
DOE does not expect the repository to restrict growth in the region. The needs of the repository are well defined and very predictable so that they can be integrated into development plans and provide a base to support resource expansion. Population growth on the other hand is much less predictable and often out paces development because planning has not provided adequate resource development goals.

Electrical power demand in Nevada Power's service area has been increasing by about 6 percent per year, the highest rate in the nation. Nevada Power has used detailed forecasting and strategic planning to effectively accommodate the 6 percent growth rate. The repository electrical power needs would not be large in comparison to the growth rate and are very predictable. The repository should not place any limiting restriction on electrical power in the region to the extent that growth would be limited. Although other resources are not uniformly monitored and included in integrated planning, the regional suppliers have responded to and supported the regional growth rate for fuel and building materials. DOE expects that this historical response would continue and there would be no growth limitation.

**7.5.9 (13406)**
**Comment** - 010296 / 0031
The DSEIS goes on to identify several elements to meet the increased power requirement--an upgraded NTS distribution system; backup (diesel generator) power; a three MW solar generator; and the (currently speculative) 436 MW NTS wind farm. The DOE's electrical power plan sounds like a bunch of "cobbled together" elements, rather than a regional electric power system. Nye County believes that DOE should consider the needs of the area's regional grid and coordinate with other entities to develop a well-planned and integrated system.

**Response**
DOE considers electrical energy obtained from the NTS grid supported by regional suppliers as the primary source of power for the repository. The solar facility, which could produce as much as 3 megawatts of power, would be a dual-purpose facility, serving as a demonstration of photovoltaic power generation and augmenting the overall repository electric power supply (as much as 7 percent). The on-site diesel generators are used as back-up emergency units only and are an integral part of the facility design.

As discussed in Section 4.1.11.2 of the EIS, the NTS electrical power transmission system and regional transmission systems feeding the NTS grid would need to be upgraded to support the repository power needs. DOE expects to coordinate and negotiate with regional power suppliers to obtain the power required for the Repository. However, the fraction of regional power that would be needed by the repository is small.

## 7.5.10 MANAGEMENT OF SITE-GENERATED WASTE

**7.5.10 (165)**
**Comment** - 6 comments summarized
The State of Nevada, in several different comments, stated its belief that the proposed Yucca Mountain Repository could not use the Nevada Test Site (NTS) for low-level radioactive waste disposal. One comment expressed the concern that Yucca Mountain Repository low-level waste would not be NTS onsite-generated waste. The comment implied that for this reason the Yucca Mountain Project would be not be authorized to use NTS for low-level radioactive waste disposal. Other comments expressed the concern that NTS disposal would not be possible since NTS disposal facilities are intended solely for the disposal of defense low-level radioactive waste. These comments also expressed the concern that NTS would not be an appropriate disposal location for Yucca Mountain Repository waste because its waste would be commercial low-level radioactive waste due to the fact that the repository would be a Nuclear Regulatory Commission-licensed facility. Finally, another comment indicated the belief that no authority exists that would permit Yucca Mountain-generated low-level radioactive waste to be disposed of at NTS.